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TWO NEW SPECIES OF APHIDIDAE FROM MINNESOTA.

BY F. C. HOTTES.

The following species of Aphididae apparently new to science were collected in Minnesota during the summer of 1926.

Neosymdobi *mimicus*, n. sp.

This species appears to be very closely related to both *N. chrysolepis* Swain and *N. albasiphus* Davis. The following key may be used to separate the alate forms of the three species.

Abdomen uniform brown, prothorax without lateral tubercles, segment six of antenna uniform dusky, fore wing with accessory vein, host *Q. chrysolepis*.

Neosymdobi *chrysolepis*.

Abdomen brown with a mid-dorsal whitish stripe, prothorax with lateral tubercles, segment six of antenna with apical half dusky, fore wing without accessory vein, host *Q. alba*.

Neosymdobi *albasiphus*.

Abdomen green with eight transverse bands of darker brownish-green on the dorsum, prothorax with lateral tubercles, fore wing with accessory vein, host *Q. alba*.

Neosymdobi *mimicus*, n. sp.

DESCRIPTION OF THE ALATE FORM.

Size about 2 mm. Head and thorax dusky-brown. Antennal segments I and II concolorous with head. Comparative lengths of antennal segments as follows: III 23-26, IV 20, V 13-15, VI 7-10+6. Apical half of III and IV and slightly less than half of V dusky, apical half of base and all of terminal process dusky. Secondary sensoria as follows: III 6-7, arranged in a straight row about evenly spaced, IV 0, V 0. Hair on antenna longer and more numerous than in either *N. chrysolepis* or *N. Albasiphus*. Eyes dark reddish brown. Beak reaching to or just beyond the base of the middle pair of coxae.

Thorax same color as the abdomen. Femora slightly dusky throughout. Tibiae uniform light yellowish-brown. Tarsi light dusky-brown. Fore wings considerably narrower in proportion to length than in *N. chrysolepis*, second branch of media about mid-way between first branch and margin of wing. Hind wings as in *N. chrysolepis*.

Abdomen green with eight transverse bands of greenish-brown on the dorsum. These bands do not extend across the abdomen but there are large spots of the same color at the sides of the segments. Cornicles and area around the base of the cornicles white. The cornicles are not as wide as those of *N. albasiphus*. Cauda brownish very inconspicuous. Anal plate of the same color as the bands on the dorsum, rather deeply bilobed and provided with numerous long hair.

DESCRIPTION OF THE APTEROUS FORM.

Length about 1.62 mm. Head and thorax dusky-brown. Segment I of antennae concolorous with head II slightly lighter in color. Segments III, IV, and V whitish with apical portions dusky. Base of VI light, rest dusky. There are no secondary sensoria. Proportional lengths of antennal segments as follows: III 21, IV 14, V 11, VI 8+5. Eyes as in the alate form. Beak extending slightly beyond the second pair of coxae. Legs as in the alate form.

Abdomen dusky brown, shining, in some specimens the abdomen has an indication of green. The segments appear to be separated at the lateral margins by a white space which sometimes extends across the abdomen, making it appear banded. Cornicles as in the alate form. Cauda as in the alate form. Anal plate rounded with hardly an indication of a dent in the posterior margin. Gonapods very large and covered with numerous long hair.

Type alate viviparous female collected on *Quercus alba*, Bemidji, Minnesota, July, 1926, F. C. Hottes, in the aphid collection of Dr. O. W. Oestlund.

Neothomasia abditus, n. sp.

This species is apparently closely related to *Neothomasia saliciortidis* Essig. Like the former species this species is found associated with *Fullawaya saliciradicis* Essig, feeding near the surface and sometimes on the roots of *Salix longifolia* growing in very sandy soil.

DESCRIPTION OF APTEROUS FORM.

Length, about 2.20 mm. Head yellowish-brown, eyes bright red. Segments of antennae with the following proportions: III 15, IV 9, V 9, VI 5+4. There are no secondary sensoria. Segments III and IV yellowish others slightly dusky. The beak is very long, always reaching beyond the metathoracic coxae.

Prothorax same color as the head, apparently without tubercles but very much swollen on the lateral margins. There is but little differentiation between the remaining segments of the thorax and the abdomen.

All segments except the tarsi of the prothoracic legs yellowish, tarsi dusky. Femora and tarsi of mesa and meta thoracic legs dusky-brown, tibiae of a uniform light-yellow. Tibiae of hind legs subequal to the sum of segments III, IV, V and VI of the antennae. In life there is a suggestion of a T or Y shaped area of a very light shade of violet on the dorsum of the mesa and meta thoracic segments. The remaining area is a light-fawn color sprinkled rather heavily with small dots of light brown from the center of which a hair projects. At the margins of the segments there are large blotches of light brown similar to those along the margins of the abdomen.

Color of abdomen light-fawn with small light-brown dots arranged in more or less regular transverse rows on the dorsum. Two rather wide bands of a very pale violet are indicated on the dorsum about in line with the cornicles. It is possible that this violet color is due to the "Mycetocytes" which in this species are very large. The cornicles are yellowish and about as long as they are wide at the base. The last two segments of the abdomen, cauda and anal plate are brownish. The cauda never extends to the end of the anal plate. The hair on the posterior part of the body is much longer than on any other part, being equal to or longer than segment VI of the antennae.

DESCRIPTION OF ALATE FORM.

Described from mounted material taken by Dr. Oestlund in 1921.

Size about 1.7 mm. Color apparently the same as in the apterous form.

Comparative lengths of antennal segments as follows: III 15-23, usually more than 15, IV 9, V 8, VI 6+5. Secondary sensoria as follows: III 12-15, IV 0-2, V 0.

Stigma of fore wing brownish. Second branch of media midway between first branch and margin of wing.

Other parts apparently the same as in the apterous form.

Type apterous viviparous female, collected on *Salix longifolia*, July, 1926, St. Paul, Minnesota (Friendly Sand Dunes), F. C. Hottes, in the aphid collection of Dr. O. W. Oestlund.